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Dayton, OH

August 17, 2004



Real-Time & Embedded
computing conference



bringing an essential resource to you



August 17, 2004
Hope Hotel & Conference Center

Wright Patterson Air Force Base
(at Gate 12-A, just before entering the base)
Dayton, OH 45433
937-879-2696
www.rtecc.com/dayton

8:00 am–3:00 pm

We invite you to be our guest at the
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Real-Time & Embedded computing conference

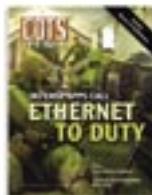
The Real-Time & Embedded Computing Conference.

A distinctive collection of conference sessions and exhibits specifically for embedded computing engineers, managers and decision-makers.

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real-time & embedded computing conference



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Open-door Technical Sessions

Dayton, OH

August 17, 2004

8:45 – 9:30 AM

Controller Area Network (CAN) - Serial Network Technology for Embedded Solutions

presented by esd electronics

Controller Area Network (CAN) is a serial network originally designed for the automotive industry, and has become a popular bus in industrial automation as well as other applications. The CAN bus is primarily used in embedded systems, and as its name implies, is a network technology established among microcontrollers. It is a two-wire, half duplex, high-speed network system and is well suited for high speed applications using short messages. We will teach the basics of CAN and aspects of implementation and development.

The Role of an OS & Network Stack in Designed High Reliability Networked Devices

presented by Green Hills Software

Join us for a technical discussion on the role of an operating system and network stack in designed high reliability networked devices. We'll discuss networking requirements as well as implementation details to provide performance, uptime, and response time guarantees for embedded systems.

Tips on Addressing the Top Challenges of Embedded Computing

presented by Motorola Computer Group

The major challenge of today's high end embedded computing solution designers is gaining the competitive advantage with cost-efficient solutions while protecting their customer's technology investment. Attend this session lead by Motorola technology experts to learn how the latest advancements in embedded computing technology can give you the edge to win.

10:00 – 10:45 AM

CANopen - Higher Layer Protocol based on Controller Area Network

presented by esd electronics

CANopen is a networking technology based on the serial bus system "Controller Area Network" (CAN) which connects a master device (most probably a PC) with numerous slave devices such as digital I/O, analog I/O, motion controllers, sensors, actuators, etc. Developed originally for passenger cars, the CAN two-wire bus system is already in use in over one million industrial control devices all over the world. In this session you will learn the basics of CANopen plus all aspects of implementation and development.

Specifying Parameters for Real-Time Networks

presented by Systran

The proper specification of network parameters allows a single physical layer to handle a complex mixture of network traffic. It is important to look at throughput requirements along with latency and deterministic needs. This technical session looks at specifying these programs based upon the application being performed.

Redefining Embedded Development

presented by Wind River

See how Wind River Platforms is changing the embedded software industry with the first ever market-specific integrated platforms. Our new standardized integrated platforms provide a complete foundation to meet the specific requirements of vertical markets. Learn how Wind River Platforms pre-integrates market-leading operating systems, tools, connectivity software, and management features with reference hardware, services and partner technologies. The resulting depth of these platforms reduces project risk and enables developers to focus on differentiation and enhanced product performance.

Directions to the Hope Hotel & Conference Center

From I-675:

- At Exit-20, follow Dayton-Yellow Springs Rd. to Ohio 444
- Turn left on Ohio 444
- At the next light turn right (as if to go through Gate 12A)
- Bear right turning into the entrance of the Hope Hotel



11:15 – 12:00 PM

Linux for Embedded Systems

presented by LinuxWorks

Linux is easily the fastest growing operating system in the embedded world and is an excellent platform for a wide range of embedded computing tasks. In this session we will demonstrate how you can develop with Linux in all your embedded designs, from general purpose, to hard real-time, to safety critical and secure systems. You will learn how to develop multiple applications using the same API and with the same tools regardless of the operating systems requirements for the end product. This presentation will also address our vision for Linux, real-time, safety and security in the shaping of the embedded marketplace.

Using FPGAs for Signal Processing

presented by Mercury Computer Systems

FPGAs have great advantages for some signal processing operations, but all algorithms are not well-suited to an FPGA implementation. This presentation covers a system-level approach in which FPGAs and PowerPCs are connected by a high-bandwidth switch fabric, enabling an application to be partitioned between them for maximum effectiveness. Supported by system software and integration tools, it is a flexible and effective architecture.

Data Distribution Service Middleware Standard for Real-Time Applications

presented by Real-Time Innovations

The Data Distribution Service (DDS) for Real-Time Systems is an important new standard that describes Data-Centric Publish-Subscribe network communications. This session will clearly describe the differences between data-centric publish-subscribe and object-centric client-server networking (CORBA), along with the applicability of each. Examples, using the NDDS product implementation, will be provided.

1:00 – 1:45 PM

Embedded Linux: The Time is Now

presented by MontaVista Software

This session discusses the rising interest in Linux for embedded and real-time systems. The traditional embedded development model is facing incredible pressure including rapid time-to-market, software complexity, growth in the size of development teams, and much more. We will examine how the embedded market has evolved and review its key drivers today including the evolution of the ‘software stack’ and technological hardware advances. We’ll look in detail at how the techniques in the new embedded development era using Linux, make Linux a viable platform for real-time embedded systems development, and the impact of these changes on your development process.

Real-Time CORBA

presented by Objective Interface Systems

Learn first hand about ‘Real-Time CORBA’ for the development of hard real-time systems, where reliability and predictability are critical, uniquely suited to building fast, reliable distributed systems that are predictable from end-to-end. See how Real-Time CORBA can be used by developers building applications with hard deadlines, such as those found in avionics and process control. These communities require maximum performance and deterministic capabilities so they choose the only real-time standard for distributed systems.

Linux Advances in the 2.6 Kernel

presented by LinuxWorks

Linux is shaping the embedded marketplace today and is becoming a driving force in embedded systems design. We will discuss the advances in the 2.6 Linux kernel and how these kernel advances are better suited to embedded systems, particularly those systems requiring some degree of determinism and predictable performance. We will also address why POSIX conformance is important for embedded developers.

BE OUR GUEST FOR LUNCH IN THE EXHIBITION HALL

Exhibit Hours
8:00 am – 3:00 pm

Exhibitors

exhibitors as of July 28, 2004

Accelerated Technology www.acceleratedtechnology.com	Hagiwara Sys-Com www.hsc-us.com	Radstone Technology www.radstone.com
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EBSnet www.ebsnetinc.com	Meta Technical Sales www.metatechsales.com	Timing Solutions www.timing.com
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EMJ Embedded Systems www.emjembedded.com	Motorola Computer Group www.motorola.com/computer	Wind River www.windriver.com
Enea Embedded Technology www.ose.com	Multi-Tech Systems www.multitech.com	
esd electronics www.esd-electronics.us	Nallatech www.nallatech.com	
GE Fanuc Embedded Systems www.gefanuc.com/embedded	Objective Interface Systems www.ois.com	
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